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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,718	01/06/2004	Chun-Chang Lai	AOIP0011USA	1717
27765	7590	07/11/2006	EXAMINER	
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION			BUI, HUNG S	
P.O. BOX 506			ART UNIT	
MERRIFIELD, VA 22116			PAPER NUMBER	
			2841	

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/707,718	<b>Applicant(s)</b> LAI ET AL.	
	<b>Examiner</b> Hung S. Bui	<b>Art Unit</b> 2841	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 8, 11-14 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sands et al. [US 6,246,576] in view of Rolls et al. [US 6,750,562].

Regarding claims 1 and 11, Sands et al disclose a computer system (figures 1-3), comprising a housing (210), a motherboard case (200) being mounted therein the housing, wherein the motherboard case has a top side (defined by a downward direction) and a bottom side (defined by an upward direction), a cage (figure 2) installed on a region inside of the housing and adjacent to the top surface of the motherboard case.

Sands et al. disclose the instant claimed invention except for a motherboard being installed inside the housing and at least one integrated drive electronics device being installed inside the cage.

Rolls et al. disclose a computer system (figures 3-4), comprising:

- a housing (figures 3-4);
- a motherboard (40) installed inside the housing, the motherboard comprising:
- a top surface (a downward direction of the surface from the motherboard shown in figures 3-4);

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- a bottom surface (an upward direction of the surface from the motherboard shown in figures 3-4);
- a central processing unit (42) installed on the bottom for the processing data;
- a cage (48) installed on a region inside of the housing include at least one drive electronics device (50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the mounting design of the motherboard of Rolls et al. within a base of the motherboard case of Sands et al. and in additional using the cage having the drive electronic device of Rolls et al. within the cage of Sands et al., for the purpose of producing a flow of air when electronic devices are rearranged in the computer system.

Regarding claims 2 and 4, Sands et al. in view of Rolls et al. further disclose a first heat ventilating fan device (figure 6) installed on a region inside of the housing and adjacent to the bottom surface of the motherboard case for ventilating heat generated by the central processing unit to a region outside of the housing.

Regarding claim 3, Sands et al. disclose the instant claimed invention except for a heat ventilating device being a pipeline cooler.

Rolls et al. disclose wherein a first heat ventilating device (68) is a pipeline cooler (figures 3-4 have shown a pipeline cooler by a rectangular pipebox adjacent to the fan 68).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the pipeline cooler design of Rolls et al. in Sands et al., for

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the purpose of creating a flow of air that creates pressure within the pipeline cooler that is greater than the ambient pressure in the housing.

Regarding claim 8, Sands et al. in view of Rolls et al. further disclose at least a memory slot (85, figures 3-4), being installed on the bottom surface of the motherboard.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the memory slot with the motherboard in Sands et al., as modified by Rolls et al., for the purpose of installing memory to the computer system.

Regarding claim 12, Sands et al. further disclose the motherboard case having at least one positioning locking aperture/tab (530, 722, figure 7), when the motherboard case locked to the cage in the computer housing.

Regarding claims 13 and 18, Sands et al. disclose the motherboard case including a plurality of headers (figures 1-3) cooperated with connectors.

Regarding claims 14 and 16-17, Sands et al. disclose the instant claimed invention except for the specific of integrated electronic device.

Rolls et al. disclose the integrated electronic devices such as a hard disk drive (60), a CD-ROM drive (52) and a floppy disk drive being mounted in the cage (48) on the top surface of the motherboard (figure 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add integrated electronic device into the computer system of Sands et al., as suggested by Rolls et al., for the purpose of operating the computer system.

3. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sands et al., as modified, as applied to claim 1 above, and further in view of Hileman et al. [US 5,963,424].

Regarding claims 5-7, Sands et al., as modified, disclose the instant claimed invention except for a second heat ventilating device installed in the housing and adjacent to the top surface of the motherboard to dissipate heat.

Hileman et al. disclose a computer system (figure 1) having at least one fan (42) installed with a power supply to dissipate heat from the computer system.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add at least one fan with ventilating device/power supply adjacent to the top surface of the motherboard of Rolls et al., in Sands et al., as suggested by Hileman et al., for the purpose of providing dissipation heat of the computer system.

4. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sands et al., as modified, as applied to claim 8 above, and further in view of Bologna et al. [US 6,462,670].

Regarding claims 9-10, Sands et al., as modified, disclose the instant claimed invention except for the memory slot being installed in the motherboard obliquely with respect to the bottom surface of the motherboard.

Bologna et al. disclose a computer (figure 3) including a plurality of memory slots (slots cooperated with a plurality of memory cards 68), wherein the memory slots are

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obliquely with respect to the surface of a motherboard (figure 3) and the memory slot has a height smaller than that of the central processing unit (62).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the memory slot design of Bologna et al., in Sands et al., as modified, for the purpose of enabling heat dissipation in the computer.

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sands et al., as modified, as applied to claim 1 above, and further in view of Kim et al. [US 2003/0047606].

Regarding claim 15, Sands et al., as modified, disclose the instant claimed invention except for the integrated electronic device being a card reader.

Kim et al. disclose a computer system (figures 1-2) having at least one integrated electronic device being a card reader (202).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a card reader to replace one of the integrated electronic devices of Sands et al., as modified, for the purpose of reading/inputting data from a smart card/memory card and transmitting the data as electrical signals, optical signals to the computer system.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.



**Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung S. Bui whose telephone number is (571) 272-2102. The examiner can normally be reached on Monday-Friday 8:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (571) 272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

07/07/06  
**Hung Bui**  
**Art Unit 2841**

